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ABSTRACT

The booklet offers five presentations from a 1975 special conference on the role of the psychologist, audiologist, and speech pathologist in working with the deaf-blind child. The first paper, "Meeting the Needs of the Severely Handicapped" by L. Hall, addresses the needs of special education, the role of administration in special education, and the role of parents as a moving force. B. Franklin reviews "New Techniques for the Auditory Evaluation of Deaf-Blind Children" such as the Crib-O-Gram for testing the hearing of infants. "The Role of the Language Therapist with the Deaf-Blind" is seen by B. Dybdal to include diagnosis of the language disorder, assessment of student behavior in terms of development, evaluation of receptive and expressive language, and establishment of goals/objectives for each child. In "The Psychologist and the Deaf-Blind Child," R. Stillman concludes that psychologists can perform an important function simply by evaluating the validity of assessment methods utilized with deaf-blind children and that psychologists with a broad perspective can describe for the teacher a deaf-blind child's behavior with reference to the entire complex of cognitive, attentional, language, communicative, social, and emotional factors that comprise human behavior. A final article by J. Cooper, "Composite Evaluation," offers suggestions for the educational diagnostician which include using social rewards, learning some kind of signing, defining visually and tactually the area you will be working in with the child, ignoring problem behavior unless it interferes with the work, and observing the child in the home and the classroom. (SW)

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Proceedings

The Psychologist, Audiologist, and Speech Pathologist and the Deaf-Blind Child

Prepared under the direction of

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Preface

A special conference on the role of the psychologist, audiologist, and speech pathologist in working with the deaf-blind was conducted November 5 through 7, 1975, in San Jose, California. The conference participants were outstanding professionals with varied backgrounds and a strong interest in programs and services for the deaf-blind. The information and views that these individuals shared were both enlightening and inspirational. I am sure that this printed version of their presentations will be a valuable reference for anyone working with deaf-blind children.

WILLIAM A. BLEA
Project Director
Southwestern Region Deaf-Blind Center

Agenda for Workshop

Holiday Inn
282 Almaden Boulevard
San Jose, California

Wednesday, November 5, 1975

5 p.m. ..... Registration

7 p.m. ..... Welcome

William A. Blea
Project Director
Southwestern Region Deaf-Blind Center
California State Department of Education
Sacramento, California

7:30 p.m. ..... Workshop Orientation

Introduction, Keynote Speaker
(To Be Announced)

Question/Answer Period

Thursday, November 6, 1975

9 a.m. ..... Introduction to Workshop

William A. Blea

9:15 a.m. ..... New Techniques for the Auditory Evaluation of Deaf-Blind Children

Barbara Franklin, Coordinator
Deaf-Blind Program
Department of Special Education
San Francisco State University
San Francisco, California

10:45 a.m. ..... Break

11 a.m. ..... Speech Pathology and the Deaf-Blind Child

Betsy Dybdal, Speech Pathologist
Office of the Los Angeles County
Superintendent of Schools
Los Angeles, California

Noon ..... Lunch

1 p.m. ..... The Psychologist and the Deaf-Blind Child, Part I

Robert Stillman, Researcher
Callier Center for Communication Disorders
Dallas, Texas

2 p.m. ..... The Psychologist and the Deaf-Blind Child, Part II

James Rudolph, Psychologist
Midwest Regional Center for Services
to Deaf-Blind Children
Lansing, Michigan

2:30 p.m. ..... Break

2:45 p.m. ..... Small-group Sessions

Group moderators and recorders selected from each group. Presenters will act as resource to each group, rotated at 15 minute intervals.

3:45 p.m. ..... General Session—Small-Group Summaries

Following General Session—Display of Evaluation Materials

Carol Whiting
Educational Psychologist and Private Practice
Mt. Diablo Unified School District
Concord, California

Friday, November 7, 1975

9 a.m. ..... Introduction to Day's Activities

Staff

9:30 a.m. ..... Videotape Demonstration of a Composite Evaluation

Judy Cooper, Educational Diagnostician,
Institute for Study of Mental Retardation
and Related Disabilities,
University of Michigan,
Ann Arbor, Michigan

and a

Deaf-Blind Child from California
for Critique by Participants

10:30 a.m. ..... Break

10:45 a.m. ..... General Discussion of Tape and Individual Critiques

Noon ..... Lunch

1 p.m. ..... Small-Group Sessions

1:45 p.m. ..... Summaries

2:30 p.m. ..... Workshop Summary Evaluation and Recommendations

3 p.m. ..... Conclusion of Workshop

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Meeting the Needs of the Severely Handicapped

Presented by Leonard Hall
Assistant Commissioner of Education, Missouri State Department of Elementary and Secondary Education

I want to start off by saying that I have never taught one day in a classroom with children. I have not taught deaf-blind children; I have not taught deaf children; I have not taught blind children. But when people ask me, "How many classrooms have you been in?" my response is, "How many children have you been in? How many youngsters have you climbed inside of? How many children have you held on your lap, trying to test their hearing? How many children have you been with on your knees in a soundproof, sound-field system, trying to get some kind of response? How many parents have you held hands with, telling them that, yes, their child is deaf; or, no, perhaps we have to look at mental retardation." I have not been inside of any classrooms professionally; but I have been inside of a few youngsters, and I try to bring that dimension, that point of view, into Missouri's educational system. I think that this is a point of view that has to be brought into all educational systems if we are going to get on with the task of educating the severely multihandicapped, deaf-blind youngster.

Needs of Special Education

Special education defies the traditional pedological model of teaching because the youngster does not care about how you were taught to teach. Your responsibility is to figure out how the child can learn. The books have to be thrown away because no textbook that I know of really covers what is going to happen at 9:20 a.m., when the youngster acts out in a certain way, or when the youngster makes known his or her own particular needs. Textbooks do provide a general orientation and point of view to draw from, but gut-level instinct is needed to climb inside and to try to make something positive happen. This is not new for the audiologist who has been trying to get some kind of response out of that preschool youngster. It is not unusual for the speech pathologist, and it is not unusual for the clinical psychologist or other clinically oriented people. But it is almost heresy in the educational community. Try to explain that the sandbox full of macaroni and dried beans is education or that trying to teach the youngster to hold a spoon is education. In Missouri, services have long been denied to students who could not feed themselves or were not toilet trained, when perhaps the education they needed was to learn how to feed themselves or to become toilet trained. This year, for the first time, requests for equipment and supplies for the various state schools for the severely handicapped (74 of them) included forks with straps, and Pampers. The schools were taking youngsters who were not able to control their bowels or bladder, and literally truckloads of Pampers were brought in. The schools are not taking preschool youngsters yet, but they are finally taking some severely involved youngsters.

Role of Administration in Special Education

Many people say that one cannot be an advocate for the handicapped child and be an administrator at the same time. They say that to be a true advocate, one has to be a practitioner or some other type of provider of services designed to meet the child's needs. My response is that you can talk about all the advocacy you want; but not a single child will be served until you can balance your budget; present to the Governor needs based on more than gut-level emotional issues; and show that services will be productive and cost effective, save the taxpayers' money, are not going to be duplicated, and so forth. Whether one likes it or not, the money and the permission to conduct programs come through administrative channels. The best advocates can be administrators.

Parents as a Moving Force

In society today we are seeing an unprecedented awareness of and concern for the rights and needs of the handicapped individual. We are seeing a tremendous change take place in the educational system of our country as it applies to handicapped

children. But let me say that one thing that is going on right now not only irritates and concerns me but also horrifies me. Someone said a few years ago that this was the day of legislation and litigation. The courts have told us what to do, but they have not been able to tell us *how* to do it. Much of what is happening in human dynamics among professionals is going to hurt, stall, and perhaps retard the efforts to serve handicapped youngsters. Regardless of the efforts of many dedicated people, the primary moving force that has focused attention on the deaf-blind and the severely handicapped has been the parents. As professionals, we are concerned with and somewhat threatened by the fact that the force of the consumer and not the force of the professional has gotten the job done. We find that parents and consumers are putting demands on us that we are not prepared to respond to. We feel a little bit insecure about having our little empire challenged. The questions may be logical and the people may be sincere, but we feel that they have no business asking those kinds of questions because, after all, "I have my doctorate (or classroom, or clinic), and I am the one who knows." But I do not think that we as professionals have really stopped to acknowledge the fact that it was mom and dad and the consumer who made things happen.

I am also concerned about attitudes toward the handicapped. We are exploiting the handicapped, especially the severely handicapped. Never let it be said that I do not like telethons. Every Labor Day I stay up all night and in a pang of conscience call in my pledge to Jerry Lewis. But handicapped children need help every day. I think we are letting the people of the nation buy off their responsibilities and their consciences with respect to the needs of their handicapped neighbor. I do not have a better answer or a better alternative, and I *want* Jerry Lewis to get $20 million next year. But it concerns me that we have taken this telethon attitude, this billboard advertising attitude. We are saying that we can help the handicapped by contributing money. The handicapped people in this country need more than money: they need a reevaluation of our attitudes toward them.

We used to talk about the deaf and dumb or the deaf-mute. Now we talk about the deaf (except my grandmother, who still talks about the deaf and dumb). We used to talk about the imbecile, the idiot, the moron, and the lunatic. Now we use such terms as *educable, trainable,* and *profound* or *mildly to moderately to severely handicapped.* But they still call them imbecile, idiot, and moron down the street, and one of the best selling songs in the country was about a deaf and blind child playing a pinball machine.

So who has made progress? We might have made progress in our inner circle and in our journal articles, but in the meantime the people out there need us. They need somebody to try to change that attitude at the neighborhood level. All of us know somebody who has needed our help, and this attitude has to evolve at the local level—within the coffee klatches, in the Monday morning discussions between mothers, and so forth. People must be made to know that retardation is not contagious and that because a child is deaf-blind or physically unattractive, it does not mean that he or she is retarded. They need to know that the child has potential and that we just have to start a little sooner and work a little longer to help that child be something and do something.

To have an attitude evolution take place at the school requires more than a conceptual model. The regular teacher, if there is such a thing, is tremendously threatened by special education. Special education means taking children out of the regular classroom because they are not learning in that classroom. It provides for a teacher who is going to have only four youngsters and who will get paid as much as the regular classroom teacher who has 40. Regular teachers think that there is something wrong in that situation, and this is an attitude that must be straightened out. The teaching profession has to get back on the track about accountability.

About two weeks ago a teacher approached me in St. Louis. She said, "Dr. Hall, what are you going to do about the fact that I have all these misplaced children in my class?" And I said, "What are you going to do about it? You're the one teaching those youngsters. Are you going to talk to the principal or are you going to talk to the superintendent about the fact that you've got too many children in your class? You can't be effective if they are the wrong kind of children and there is not the proper diagnosis behind each one."

"Oh, my goodness," she said, "I couldn't talk to my principal. And if I went to the superintendent, I would get fired. You don't understand."

I blew my cool. I said, "Now, wait a minute. You are not afraid to talk to your superintendent when salary time comes, and you are not afraid to talk to your superintendent when it comes to an insurance package or fringe benefits, so why can't you talk to your superintendent about the very purpose you are employed for, the educational needs of these youngsters? Why can't you go back

to your local state teachers' association or the National Education Association or the American Federation of Teachers? Start getting the package put together to bring these issues to the front. These are the real issues, these educational needs of the youngsters. When are you as a teacher going to stand up for the youngsters that are in your care six hours a day?"

I think she was taken off guard. She said, "You don't understand, it's different." And I said, "You bet it's different. But isn't that what it is all about?" I think we have to get back to what it is all about, and we have to have an attitude evolution in the school house to get us there.

This attitude evolution needs to take place in the teacher training program too. We need to change the attitude of the people who are serving the youngsters, and we need to change the attitude of the consumer about his or her neighbor to really make any kind of effort for the handicapped and severely handicapped.

Now, what about the accountability for the professional who is not a teacher? I believe that what must happen is very well exemplified here in the bringing together of the three disciplines—psychology, audiology, and speech pathology. *Staffing* is the key word. We need staffing in which everybody gets together, with no empires and no separate jealousies, in which we have a studied best judgment about what the child needs, what the alternative is, what the interventions are, and what must happen. But that is not what happens among the various disciplines. There is no communication, and there is no talk. They have separate points of view, with no discussions. Who is suffering? A whole lot of children out there are suffering. Nothing is wrong with professionals having a good, strong, healthy disagreement. Because you disagree about a diagnosis does not mean that you or another professional is incompetent. The disagreement is the result of two different points of view or two different bases of experience. But we have to work at it together. It is hard to explain why we are letting the needs of a youngster go unserved because we, the "professionals," are failing to come together as a group and to offer our studied judgment, our best thinking.

Money is the final point. There is no question that we need money and that the school districts are short of money. I am convinced, however, that as long as we can buy new band uniforms and new basketball uniforms, that no matter how tight the school budget is, no valid excuse exists for letting the needs of the severely handicapped go unmet or unserved. Yet, it continues to happen. You can throw back the argument, "But you don't understand the school budget because, you see, we have this fund over here which pays for the uniforms and pays for resodding the field and this over here is our educational fund." Talk to your accountants about your funds. Funds are what you want to make them. Expenditures reflect your priorities and the priorities of your district. About two years ago, Ed Martin put it beautifully when he said "All dollar bills are green, and until you lay them out on the table and show me a different color for a different fund, then do not talk to me about funds." I think that this is a tremendously important point for us to take to our education agencies. All dollar bills are green, regardless of fund. We should put the dollar bills where the people want them and where they can be used for the good of society.

Our single overriding purpose is to serve handicapped youngsters. Words are not going to accomplish anything. Workshops and meetings like this one can perhaps help us to focus our efforts in the right direction, but what is really needed is a commitment and a purpose, an overriding concern to meet the needs of the severely handicapped youngster.

New Techniques for the Auditory Evaluation of Deaf-Blind Children

Presented by Barbara Franklin
Coordinator, Deaf-Blind Program, Department of Special Education, San Francisco State University

Rita Eisenberg, in reviewing the literature and research done in pediatric audiology in a 1971 article in the *Journal of Auditory Research,* made the following comment:

> Audiometric tests for children, all of which boil down to variations on the peep show (developed in the 50s), are nothing more than adaptations of adult procedures that were designed to test adult functions. The routine use of pure tones and various abstract noises is rooted in history and convenience rather than in logic or knowledge of developmental auditory functions. New methods for measuring hearing in uncooperative patients, young or old, remain relatively unexplored (p. 151).

As one who has been involved with audiometric testing of children for 21 years, I am in total agreement with Dr. Eisenberg's statement that audiometric testing of children, sometimes referred to as pseudoaudiology, has been adapted from techniques originally developed for testing adults. The majority of hearing-impaired adults have adventitious hearing losses; that is, hearing losses that were acquired after language was learned. For these adults routine hearing tests using speech and pure tones are generally effective. However, the typical tests using speech usually cannot be used with children who have congenital hearing losses; that is, hearing losses that were acquired before language was learned. In addition, most children under four years of age and low functioning children of all ages usually find pure tones meaningless. Therefore, tests using these techniques are unsuitable for hearing-impaired children and particularly unsuitable for the deaf-blind child. These children, however, will often respond to more conventional auditory stimuli, such as environmental sounds and speech. Perhaps these sounds have acquired meaning for the children.

It has now been established that the left hemisphere of the brain is specialized in almost all individuals for speech, both for receiving and expressing, and that the right hemisphere is specialized for all other types of auditory stimuli, including music and environmental sounds. It is possible that pure tones are processed predominantly by the right hemisphere and that the pure-tone audiogram, therefore, provides little or no information about an individual's ability to process speech. In other words, a child's ability to respond to a pure tone cannot automatically be generalized to his or her ability to respond to the spoken word. It has also been established that the auditory pathway must be intact for the brain to process speech. However, Goldstein reported in 1972 that he knew of no clinical instance in which a confirmed central nervous system lesion, even bilaterally at any level, in the presence of a normal peripheral auditory mechanism has led to a reliably measured impairment of auditory sensitivity.

Table 1, on page 5, is an adaptation of data included in *Hearing in Children* (Northern and Downs, 1974). It shows the average intensities at which infants of various ages can be expected to respond to various auditory stimuli.

Several methods for testing the hearing of newborns are currently being used. One such procedure is the Crib-O-Gram, developed by Blair Simmons of the Stanford Medical School, in which the newborn's responses to narrow-band noise test sounds are measured in the infant's crib. Eisenberg and others have used bells, blocks of wood, sound-toys, and tissue paper to elicit responses from newborns and infants.

The January, 1974, issue of *Science* included an article by Condon and Sander, researchers at the Boston University Medical Center. These researchers reported that as early as the first day of life, the human neonate moves in precise and sustained segments of movements that are in synchrony with the articulated structure of adult speech. The neonate is a participant in the rhythm of many repetitious speech structures long before he or she uses them for communication. These rhythms comprise a prelinguistic activity of the human infant even at birth.

I have been conducting audiometric evaluations of deaf-blind children for a number of years. To

TABLE 1

Average Intensities at Which Infants of Various Ages Can Be Expected to Respond to Various Auditory Stimuli

Age	Noisemakers *(Decibles)*	Warbled pure tones *(Decibles)*	Speech *(Decibles)*
Under 6 weeks	50–70	78	40–60
6 weeks–4 months . . .	50–60	70	47
4– 7 months	40–50	51	21
7– 9 months	30–40	45	15
9–13 months	25–35	38	8
13–16 months	25–30	32	5
16–21 months	25	25	5
21–24 months	25	26	3

obtain audiological information for those children who could not be tested by conventional procedures, I developed alternative techniques. I recorded on tape a variety of auditory stimuli–speech, music, a trumpet playing simple nursery rhymes, and sound-toys. The tape is played through an audiometer, and the intensity can be regulated by the attenuator. The speech, music, and trumpet are used to determine awareness thresholds and, in some instances, the ability to discriminate different auditory stimuli. The sound-toys are used to obtain a crude audiogram, since the frequency range of the sound-toys was established through spectrographic analysis. For example, I use a bell with no visible energy below 1,500 cps and another bell with no visible energy below 2,500 cps. If a child responds to one or both of these bells, I can obtain a crude audiogram.

I intend to develop a standardized tape that can be used to test the hearing of children. It will contain recorded auditory stimuli, including music, speech, sound-toys, and environmental sounds, and then pass them through a series of high-pass filters with various low-frequency cutoff points. Each set of stimuli will be cut off at 250 cps, 500 cps, 1,000 cps, 2,000 cps, and 4,000 cps. For example, if a child responds to a bell that has been cut off at 1,000 cps, that means that no energy exists below 1,000 cps. If the child responds at 80 dB, one could assume that the child has residual hearing at 1,000 cps at 80 dB.

Difficult-to-test children tend to adapt readily to auditory stimuli and cease responding once the signal loses its novelty. Through the use of a different auditory stimulus for each frequency, adaptation might be reduced or eliminated. Several factors should be considered in the selection of the auditory stimuli. First, both speech and nonspeech stimuli must be included. The nature of the nonspeech stimuli is also critical. The Ewings have used common household sounds to test the hearing of infants; I have also found familiar sounds to be effective auditory stimuli. Eisenberg and others recommend using auditory stimuli with a wide spectrum of frequencies, such as white noise and onionskin. I also found that those sound-toys that have acoustic energy distributed over a wide range, such as shakers and a cowbell, are most effective in eliciting responses. Eisenberg reported that a drumbeat and wooden sticks struck together were less effective than onionskin and concluded that duration might well be a critical factor in the neonate's processing of auditory stimuli. I also found that those sound-toys of very short duration, such as clackers and crickets, elicited far fewer responses than the shakers and cowbell that were sustained for a longer time.

Eight deaf-blind children, including low-functioning children whose responses had to be inferred by observation of changes in their behavior as well as higher-functioning children, were capable of being conditioned to different kinds of play audiometry. The test tape includes a trumpet playing simple nursery rhymes, music, calibrated sound-toys, and speech.

Subject No. 1 disregarded the trumpet and music, smiled at the bell that had no acoustic energy below 1,500 Hz, and disregarded that bell that had no energy below 2,500 Hz.

Subject No. 2 reached for the appropriate earphone as the stimulus was switched from one ear to the other.

Subject No. 3 was generally unhappy. The subject did not respond to trumpet or music and

quieted to sound-toys. He attended to and vocalized /m/ to speech.

When intensity was increased, subject No. 4 reached for the earphones, pulled them off, and poked his fingers in his ear. With hearing aids the subject quieted when stimuli came through the speaker and increased activity when the stimuli were turned off.

Subject No. 5 showed listening behavior, reached for the earphones when the trumpet stopped and the music started, exhibited changes in facial expression that seemed to indicate awareness of change of stimuli, and reached for the earphones when the stimuli were very intense. The subject vocalized /u/ to speech and showed a complete behavior change with speech, including rocking. The child independently held earphones to ears, again vocalized /u/ to speech, and got on the table to feel the vibration produced by stimuli coming through the speaker.

Subject No. 6, with hearing aids, was conditioned to throw a bean bag or to put a hand with a puppet in the air when pure tones were presented through the speaker.

Subject No. 7 did not want to wear the earphones. The subject then quieted and attended to stimuli. When the intensity was increased, the subject screamed, pulled off the earphones, and scratched the ear. The child appropriately followed directions on tape to "stand up" and "sit down."

Subject No. 8, with hearing aids, was conditioned to raise the hand when pure tones were presented through the speaker. With hearing aids the child was able to discriminate "red, blue, and yellow" via the ear alone, without the benefit of lip-reading.

Audiological information on these children, who were considered untestable with conventional procedures, is clearly available through the use of alternative techniques.

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The Role of the Language Therapist with the Deaf-Blind Child

Presented by Betsy Dybdal
Speech, Language, and Hearing Specialist, Office of the Los Angeles County Superintendent of Schools

In schools maintained by the Los Angeles County superintendent of schools, about 4,000 children are served by speech, language, and hearing specialists. About 500 of these children are in programs for the deaf and hard of hearing. Approximately 50 children are labeled deaf-blind, and another 150 are classified as orientation and mobility handicapped, which includes children with visual and hearing impairments.

When I began working with deaf-blind children, teachers most often asked me, "How long will it take to teach Johnny to talk?" Many deaf-blind children can vocalize and sometimes imitate phonation. But this is not indicative of the prognosis for their learning to speak. A more immediate goal is that of teaching these children a system of communication, such as signing, verbalizing, or use of the communication board.

Language therapy begins with a proper diagnosis of the language disorder. When diagnosing language disorders in "normal" children, the speech therapist can refer to a myriad of tests. These tests include norms, percentiles, and therapeutic recommendations. In the case of the deaf-blind child, however, no such diagnostic tool exists. Although one can administer a test such as the *Peabody Picture Vocabulary Test* or parts of the *Illinois Test of Psycholinguistic Abilities,* the results are questionable and often inconclusive. A more effective method of diagnosing the disorder of the deaf-blind child is that of using an informal developmental assessment. The therapist can observe the child in the setting. The teacher's method of reinforcement and eliciting of desired responses can be noted at this time.

In addition to classroom observation, the speech therapist must have some criteria with which to measure the behaviors of the deaf-blind child. In order to know if a child is delayed, the therapist must be aware of normal developmental patterns. For this reason developmental scales are used in assessment. Three developmental scales that specify behaviors in many areas are the *Koontz Child Development Program* (see Appendix A), the *Reel,*[1] and the *Behavioral Characteristics Progression Scale (BCP).*[2] Areas included are daily living skills, perceptual-motor skills, social-emotional growth, and language development. In the first segment of each strand of the *BCP Scale,* for example, are indicated types of delayed behaviors. Language development delays might be "indicates needs by gestures," "speaks in fragments," or "speaks only using present tense." As one moves across the strand, the characteristics of language development are specified in developmental order: "vocalizes," "uses facial gestures," "uses one word for many related things," and so forth.

The *Reel* is another developmental scale that indicates age-correlated skills: "follows simple commands," "tries to imitate new words," "gestures appropriately to verbal requests." The *Reel* is more explicit than the *BCP* in that it breaks down language skills, both receptively and expressively.

Using such scales, the therapist can structure a diagnostic situation in which the child displays specific abilities. A curriculum which has been developed and is being field-tested in Los Angeles County can also be utilized as a diagnostic tool. Initial processes are subdivided into various areas. (Oral-vocal-motor skills and auditory skills are of particular importance to the speech therapist.) The curriculum specifies certain tasks as essential to the learning of other specific tasks. For instance, to determine the child's ability to pattern motorically through the oral-vocal modalities, the therapist asks the child to imitate facial-mouth positions, to control his or her tongue by placing it at specific points, or to imitate vocal patterns. If the area screened is auditory memory, the therapist might request the child to repeat digits or sounds, or the

[1] *The Bzoch-League Receptive-Expressive Emergent Language Scale for the Measurement of Language Skills in Infancy.* Gainesville, Fla.: The Tree of Life Press. [n.d.]

[2] *Behavioral Characteristics Progression Scale.* Santa Cruz, Calif.: Office of the Santa Cruz County Superintendent of Schools. (Preliminary, [n.d.])

therapist might present noises and have the child select the item that made the noise.

A higher level of assessment is achieved through the use of the semantic acquisition section of the curriculum, in which more cognitive tasks are specified: association; categorization; identification of tastes, smell, and shape; and so forth. These are areas that would be of particular benefit to the deaf-blind child in developing overall awareness of sensory input. This curriculum was developed for use by all special education personnel and includes daily living skills, such as psychomotor skills; social-emotional skills; and nonoral, oral, and written language skills.

Appendix B includes part of an assessment tool (unpublished) devised by Jan Sekas, speech therapist at East San Gabriel Valley School, and myself. Usually, when we see the child, we have no prior knowledge of his or her abilities. Thus, the screening device must range from the very lowest level to a more complex level. We begin by determining the child's degree of motor control. Then we try to elicit vowel and consonant imitation. We want to know if the child is physically able to produce specified sounds. Working on the "t" and "d" sounds is pointless if the child cannot lift his or her tongue.

Next, we consider the child's receptive language abilities. We give the child a toy, and after he or she begins to play, we tell him or her to stop.

Next, we ask the child to follow simple commands. The child is asked to identify body parts. The flannel board can be used with the deaf-blind child to aid him or her in identifying body parts. Still considering receptive language, we then ask the child to identify common objects. The child's understanding of verbs is also assessed. Since the deaf-blind child may not know a particular sign, some training might be necessary: "I am jumping—This is jumping—Susie, show me jumping." (The child should then actually jump.) We assess the child's understanding of spatial relationships by asking the child to place himself or herself in, on, under, or behind a large box. If the child is too motorically handicapped, we use objects and a smaller box. The child's understanding of adjectives is also evaluated. For example, we tell the child: "Show me the *long* pencil," or "Show me the *red* cup."

To assess expressive language, we use many of the same items, but we ask the child to give the sign rather than to point to the object or picture. One of the most valuable tools in assessing the child's expressive language is a language sample. In the teaching of a normal child, a picture is presented, and he or she is asked to tell about it. With the deaf-blind child, objects can be used, or recordings of any verbalizations during play or in the classroom can be made. If objects or large pictures are used, most "conversation" will be through signing. Responses may consist of only one word, depending upon the sophistication of the child's signing abilities. My experience has been that deaf-blind children will just name the object (these are low-level deaf-blind children), so some questions may have to be asked to elicit more information. (This procedure is usually avoided with normal children.)

Most of the second page of the checklist is devoted to evaluation of a child's cognitive abilities in the areas of matching, sorting, and association. This is done by giving the child an object and placing a matching object on the table. The child is told to "put ball with ball." Then the therapist adds another object to the one on the table and asks the child to "put ball with ball" to determine the child's matching and discrimination abilities. This process is continued until five items are on the table. Associative tasks include placing objects on the table and depicting clothes, food, and toys.

After the therapist has diagnosed the language disorder, he or she must establish goals/objectives for the child. This should be done on a developmental level. In the curriculum for Los Angeles County, most tasks/skills are listed in a developmental sequence, which facilitates placing the child (unless he or she is very low functioning, in which case the therapist will often have to revise objectives or write new ones). Some hypothetical objectives for a child with no expressive language, minimal receptive language, and no attending skills are discussed below.

The first priority is to establish attending behaviors. One recently developed program, the Language Acquisition Program (LAP), developed by Louise Kent, specifies the steps to be taken in the process. The program begins at the lowest level—having a child sit in a chair with his or her hands kept down for ten seconds. The time is gradually increased. The program continues through the development of receptive and expressive language.

The federally funded Los Angeles County Autism Project, developed by Rookie Hirsch, is similar in sequence to the Language Acquisition Program. After self-stimulating behaviors are controlled (which can be a very tedious process), one can begin with the identification of objects, "verbing," understanding of adjectives, and matching

tasks. Throughout the program, the therapist should use both sign and voice to enable the child to receive input at a maximum level.

Cognitive skills are also developed in language therapy. Association, matching, and sorting skills may enable the individual to secure a job. These abilities are developed from the beginning of therapy. After a child can identify objects, he or she is asked to match the same objects and select different objects from a group (all fruits and a car—"Give me the car," then, "Give me the one that is different."). Next, the child is expected to select items that have common attributes: the round ones, the red ones, the soft ones, and so forth. Eventually, the child progresses to sequential tasks: doing puzzles, stringing beads in a specific order (red, blue, red, and so forth), and putting pictures in order to tell a story. The individual will be able to use all these skills later in a workshop setting.

One of the most important areas of language training with the deaf-blind child is that of teaching signing. Since the child usually lacks expressive language, he or she must develop a means of communication. This is why gross motor imitation is so important. If a child cannot imitate clapping, walking, turning, or arm movement, that child will have great difficulty imitating fine signing movements. One method of teaching signing is to present the item to the child and demonstrate the proper sign. Take the object away and shape the child's hands into the proper position for the sign. Continue this process until the child can position his or her hands correctly when the item is presented. Then present another object with the first one. Point to the first item presented, and elicit the correct sign. The introduction of the second object often confuses the child, but this must be done to determine the child's understanding and ability to express the correct sign.

The understanding of "wh" questions requires sophisticated skill. Therefore, the therapist should sign "What is it?" before holding up the object. In this way the child begins to associate the sign for "what" with the fact that an object is held up and that he or she is to give the appropriate sign.

Perhaps one of the most difficult areas for the speech therapist is that of classroom follow-through. Controlling self-stimulating behaviors is an all-day job that requires constant vigilance on the part of the teacher. The therapist can easily explain a program to the teacher and can ask for his or her assistance. But the therapist must remember that the teacher has several other children to work with. Therefore, the therapist might have to collect baseline data in the classroom and demonstrate to the teacher how to collect data on the child's daily behavior. The cooperative effort that occurs between the teacher and the therapist must also occur between the therapist and the psychologist, audiologist and physical therapist, and others. Information from all disciplines is beneficial for both the child and the professional involved. By working together, we can strengthen the child's program, and we can improve upon his or her progress.

Appendix A

PERFORMANCE EVALUATION

L6a	Exhibits response*	Begins to exhibit response to own vocalization, either through reaction to mirror or own body actions.
L6b	Responds to anger	Responds to angry tone if accompanied by gesture or to emphatic tactile stimuli.
L6c		
L6d	Ignores speech (deaf only)	Hearing-impaired child may respond to loud noises but not to loud voice.
L6e	Crying not rhythmic	Crying not dependent on rhythm of breathing.
L6f	Rising and falling inflection	Crying will rise and fall in tone as well as volume.
L6g	Babbling increased	Sounds include "Ah," "Goo," and raspberry sound.
L6h		

*May need to be modified for hearing-impaired child

6 Months

LANGUAGE

TRAINING ACTIVITIES

Have child talk into a resonating chamber, such as an oatmeal box, for feedback. Purchase a speaker with a light that lights when a sound is made, for stimulation of sounds. Tape-record vocal efforts of the child, then play them back for stimulation. Cooing sounds change to babbling sounds with more consonants being used than previously. Continue to stimulate with sounds that have meaning. Include hand signs for objects desired.

Sensory Impaired

A hearing-impaired child will indicate pleasure/displeasure by yelling and screeching. He will begin to sing at this age if given proper training and encouragement. Normal children will not be able to demonstrate one word until 11 months.

Language is TOTAL Communication

Source: Charles W. Koontz. *Koontz Child Developmental Program, Training Activities for the First 48 Months.* Los Angeles: Western Psychological Services, 12031 Wilshire Blvd. [n.d.]

Appendix B

ASSESSMENT PROCEDURES FOR LOW-LEVEL DEAF-BLIND

By Jan Sekas and Betsy Dybdal

I. Auditory Awareness

a. Responds to sounds (whistle, drum, bells, hand clap)
b. Responds to voice
c. Searches for sound
d. Localizes sound source
e. Attends to own name

II. Perceptual Skills

a. Grasps and releases objects
b. Transfers objects from hand to hand
c. Responds to light when introduced into room
d Reaches across midline of body with fingers and elbows extended
e. Pulls jumbo pegs out of pegboard
f. Takes objects OUT of container (Use the word "take" for this procedure.)
g. Puts objects IN container (Use the word "in" for your teaching directive.)
h. Builds block tower
i. Strings large beads
j. Matches objects according to shape and size

III. Social-Emotional Behaviors (Parent or teacher should assess.)

a. *Adaptive behavior.* (1) Uses object in ritual manner; (2) performs previously mastered task repetitiously; (3) resists learning new skills; (4) withdraws–exhibits confusion when change occurs

b. *Impulse control.* (1) Displays self-destructive behaviors; (2) displays self-stimulatory behaviors; (3) blows up, loses control when he or she can't do or get his or her own way

IV. Attention Span

Describe the child's behavior, length of attention span, what objects or things the child is attending to. Use behaviors as reinforcers for encouraging the child to complete or attend to the task longer.

The Psychologist and the Deaf-Blind Child

Presented by Robert Stillman
Researcher, Program in Communication Disorders, South Central Regional Center for Services to Deaf-Blind Children

Current abilities, behavioral characteristics, and measures of progress in deaf-blind children are usually described in the framework of the normal developmental sequence. To understand the implications and to utilize these developmental assessments, one must first appreciate the brain processes underlying development and second, must recognize the problems of validly interpreting results of developmental assessment techniques applied to deaf-blind children.

Two processes of brain development are particularly relevant in understanding the behavior of deaf-blind children: (1) the genetically programmed sequence of differentiation and elaboration of neural tissue beginning in the embryo and continuing through adolescence; and (2) the postnatal effect of sensory input in modifying the functional characteristics of the developing brain.

The genetically determined sequence of neural development results in brain growth that, barring interference or a genetically based disorder, is similar for all humans. Relevant aspects of brain growth include the development of new brain cells, changes in the myelinization and diameter of brain cell axons (permitting more rapid and efficient transmission of electrically coded messages between brain cells), and development of increasingly complex brain cell interconnections. The development of new brain cells is essentially complete at birth. However, axon characteristics and neural connectivity continue to change through adolescence, particularly in those brain areas governing higher intellectual processes.

In general, interference in the normal neurodevelopmental sequence by disease, trauma, or toxin has long-term consequences that may be mild or severe, depending upon the time of occurrence, site, and duration of the interfering process. Early and pervasive viral infection, for example, may destroy or damage large numbers of germinal cells, with a resulting delay in developing or failure to develop normal brain structure.

The effects of early damage, however, are not always as severe or permanent as one might expect. This reflects a process similar to embryological regulation, by which organs recover function as new areas take over the critical roles of damaged areas. Thus, some postnatal "developmental delays" may reflect the time required for function to be assumed by nondamaged areas. However, regulation following damage is not always without cost to the organism. Brain areas that take on new functions probably do not perform the functions that they normally perform in the brain. Furthermore, some brain areas may not be able to perform new functions with the same facility with which they are performed in the nondamaged brain or without extensive training. One should also note that not all developmental delays indicate an underlying process of regulation. In some cases a developmental delay reflects a less differentiated brain (probably fewer connections between brain cells) than is normal at a given chronological age. In this case no special endogenous process is occurring to minimize or compensate for the dysfunction. Less complex or immature behavior reflects instead brain organization and complexity more typical of, but not identical to, that of a chronologically younger child.

The jump from hypothetical neural substrates of developmental delays to their possible educational implications is a long and risky one. However, when some sort of "regulation" is taking place (usually following discrete damage), training in specific skills with the objective of restoring a critical function may be justified. Where the delay reflects, for the most part, less differentiation or where damage is global rather than discrete, training in specific skills will probably affect overall functioning minimally, unless the skill training is incorporated within a somewhat broader developmental framework, such as language/cognitive/social development.

The second factor that is critical to normal neural development is the early sensory environ-

ment. Studies on experimental animals subjected to sensory deprivation or restriction have shown marked and often permanent neuroanatomical, neurophysiological, and behavioral deficits even when an enriched sensory environment is subsequently provided. For example, studies on the visual system have shown that abnormal early visual environments have long-term consequences, the severity of which depends most importantly on the postnatal time during which the restriction occurred and less importantly on the degree of restriction. From experiments on animals critical periods for the normal development of visual functions have been carefully documented, and specific neural and behavioral effects have been described.

Environmental effects on the visual and probably other sensory systems appear to be of two types. First, the absence of normal visual input results in a failure of brain cells sensitive to certain visual stimuli to grow normally. This has been demonstrated repeatedly in experimental animals and more recently in humans with congenital, uncorrected strabismus. Second, apparently the responsiveness of some brain cells is plastic, and the cells become particularly sensitive to the type of visual stimuli present during a critical developmental period. This has been demonstrated in experimental animals but has been demonstrated only indirectly in humans because sensitivity of individual human brain cells cannot be ascertained.

Early functional plasticity of sensory systems is valuable in normal development since it permits adaptation to one's own physical characteristics or anomalies—interocular distance or slight deviations of one eye, for example. Neural plasticity is the only feasible means of modifying sensory functioning postnatally since the development of new cells would require that the original cells cease functioning for a period of time to produce new cells by division. Early plasticity may also ensure responsiveness of the system to salient features of the stimulus environment; on the other hand, it may make the system less sensitive to those stimuli that are absent during the critical period.

While early plasticity of sensory systems may be adaptive for the normally developing child, the fact that plasticity occurs only during a critical developmental period is obviously maladaptive to the child whose early sensory input is grossly abnormal. In fact, even relatively minor visual defects, such as congenital astigmatism, result in permanent neurally based visual defects (amblyopia) if the astigmatism is uncorrected within the critical period (probably the first three years).

Aside from the purely sensory defects following deprivation or restriction, sensory deprivation has other effects that have been demonstrated in experimental animals and that may occur in humans. For example, cats and monkeys whose vision is restored following deprivation during a critical period tend to respond preferentially to simple aspects of viewed objects. For example, they respond to the color, size, and brightness of an object rather than to shape or design. Similarly, following auditory deprivation and restoration, cats respond preferentially to pitch and loudness characteristics of sounds rather than to temporal features, such as duration or pattern.

Preference for simple rather than complex characteristics of sensory stimuli reflects more than an immature or less experienced sensory system, since human infants at or soon after birth discriminate complex characteristics of their sensory environment: a face from other visual stimuli, human voices from other complex sounds, and phonemes from other phonemes in human speech. Preferences for simple characteristics of sensory stimuli among the sensorily deprived instead may reflect the residual capabilities of the sensory system. Thus, essentially all brain cells in the primary sensory pathways respond to basic stimulus features, such as intensity. But responsiveness to spatial or temporal patterns probably requires the interaction of large numbers of brain cells that may not be available in the brain that has been deprived during the critical period of adequate sensory input.

An altered sensory system, however, does not preclude the acquisition of sensory functioning, particularly if some diffuse sensory input (adequate for light perception) has been received. It has been shown that, with training, descrimination and sensorimotor behaviors can be developed, although considerable time and consistency of training are generally required. The problem is that although acquisition of sensory discrimination and sensorimotor abilities does occur, the extent to which intensive training yields results only at the expense of other aspects of brain functioning is not known. Under normal circumstances the developing organism receives a balanced and often simultaneous input from many sensory systems. From this input an individual develops knowledge of the external world. During sensory deprivation the input is unbalanced, with greater weight obviously in the direction of the less impaired systems. It is possible, therefore, that intensive training and stimulation of the impaired system will create a

new imbalance by assigning functionally plastic areas of the brain to a specific sensory system. These plastic areas, then, presumably will not exhibit the functions they typically exhibit in the normally functioning brain. Furthermore, providing new, but still unbalanced, sensory input will continue to make it difficult for the individual to gain the necessary multisensory knowledge of the outside world upon which to develop cognitive abilities.

The educational implications are (1) that intensive sensory training, particularly in one modality, may affect concurrent or subsequent development of other functions; and (2) that any sensory training should be presented in a broad context, such as cognitive development, so that the child gains useful knowledge about his or her external environment, not just practice using a previously unused sensory system. In this regard one should remember that for developing children the major role of sensory systems is not to trigger motor reflexes or make precise discriminations between geometric shapes and patterns but to bring in sufficient information about the environment so that concepts leading to more appropriate interaction with the environment are developed.

Studies on developing sensory systems suggest that reduced sensory input during critical periods results in a failure of the sensory pathways to develop normally. Thus, deaf-blind children having peripheral sensory disorders since birth have received not only reduced information, but also probably distorted and certainly unbalanced, information about the environment. From this reduced, distorted, and unbalanced information, the deaf-blind child has constructed concepts of the environment and his or her relationship to it. It is not surprising, then, that even in the absence of other central nervous system pathology, the deaf-blind child exhibits generally poorer-than-normal cognitive abilities (although not necessarily poorer cognitive capacity) and that "splinter skills" abound. These factors, of course, also make difficult or impossible the use of most formal assessment techniques to make a valid assessment of the deaf-blind child's abilities and capacities.

What, then, is the role of the psychologist in programs for deaf-blind children, and how can the psychologist contribute to the education of the deaf-blind child?

First, psychologists can perform an important function simply by evaluating the validity of assessment methods utilized with deaf-blind children. Unquestionably, assessments play a major role both in educational and therapeutic planning and in legally sanctioned decisions concerning placement and availability of services. Thus, the psychologist should determine whether the assessment methods that are utilized exhibit at least the characteristics of construct, content, and criterion-related validity when used with deaf-blind children. In other words, the psychologist should determine whether the assessment technique measures the construct that it is presumed to measure. For example, does a measure of perceptual abilities measure perceptual abilities, or does it really measure language, social, or motor abilities? Does a scale designed to measure development actually measure development, or does it only document the acquisition of conditioned or patterned "splinter skills"? Even if the assessment method measures the appropriate construct, are the important areas of behavior that are subsumed under the construct adequately represented? In addition, if the objective of the assessment is to predict performance, has its predictive value been shown with deaf-blind children? The effects of multiple sensory impairments, particularly on cognitive, social, and emotional development, may mean that assessment methods that are valid for blind, deaf, or unimpaired children may not be valid when used with deaf-blind children.

Second, a psychologist with a broad perspective can describe for the teacher a deaf-blind child's behavior with reference to the entire complex of cognitive, attentional, language, communicative, social, and emotional factors that comprise human behavior. Clinical specialists tend to describe behavior only as it demonstrates the presence or absence of some specific impairment with which they are familiar. Furthermore, the psychologist can aid the teacher in integrating recommendations of clinical specialists into individual plans that are based on a broad, appropriate, developmental framework. This will ensure that educational plans for deaf-blind children are more than a string of isolated activities deemed important by physical therapists, occupational therapists, speech pathologists, audiologists, and physicians.

Composite Evaluation

Presented by Judy Cooper
Educational Diagnostician, Institute for Study of Mental Retardation and Related Disabilities, University of Michigan

Educational evaluation includes self-care, adaptive or cognitive behavior, language, socialization, and motor development. No one can be an expert in all these areas; so the educational evaluator must work closely with those in other disciplines. Audiologists, speech specialists, psychologists, and other professionals can be very helpful to the diagnostic teacher; and the diagnostic teacher, in turn, can offer methods that will enable these professionals to work more efficiently with deaf-blind, multihandicapped children.

Working with a child on a one-time basis is difficult because the child experiences an unaccustomed shift in routine. Deaf-blind children are easily distracted. They need to work in a familiar setting, with as few distractions as possible. When they experience a big break in their routine, many deaf-blind children cannot adapt. The psychologists who are most successful in working with deaf-blind children test these children and work with them in the classroom rather than in another room. If at all possible, try to fit yourself into a child's routine. The responses that you get will be more realistic and more valid.

Before I started working with deaf-blind children, I used social rewards. I thought everybody worked for praise, but that is not true. I have found that I have to use tangible reinforcements when I am working with children on a short-term basis. If the teacher or parent objects to whatever method you prefer, explain *why* you are using the particular method. You have to maximize what you are getting from the child when you are working on a limited-time basis.

Another frustration professionals face is the lack of a formal communication system to use with deaf-blind children. Often, one has no way to tell a child to sit down, for example, without physically manipulating that child. When you are dealing with very low-level deaf-blind children, you have to remember that you are going to have to shape almost everything you do with them. You are going to have to show them how to do things. Psychologists sometimes feel that this destroys the validity of the test, but if the child is not following what you are doing, how and what are you going to test? With some shaping on your part, the child may be able to demonstrate certain behaviors.

If you are working with deaf-blind children on a regular basis, I suggest you learn some kind of signing. All you need are basic signs. I am not a very good signer myself because I work with low-level children, who do not require much signing. But through signing you can offer consistent visual cues to the child. Even with children that have good hearing or children with some beginning speech, I find that a combination of signing and talking is the best mode of communication. I always talk to the child no matter how much hearing he or she has. I do not think we can ever assume that the child is not hearing even if he or she is not reacting. These children respond in very subtle ways.

Many deaf-blind children with good, usable vision have discrimination problems. If you work with neutral colored blocks on a neutral colored table, they may not be able to see what you want them to do. If you are testing a child and the child cannot see what you want him or her to do and does not perform, that does not necessarily indicate that he or she does not understand the task. You want to test whether the child can put the forms on the board, not whether he or she can see them. To aid discrimination, use high contrast materials. Yellow on black, for example, represents a very high contrast. I use a tablecloth or a piece of felt that contrasts to the object that I am using. This way you are helping the child achieve his or her maximum output without destroying the validity of the test. If you have a child who has very poor vision, you may want to provide something with a texture contrast in addition to the color contrast so that the child can feel what he or she cannot see. For example, you can quickly make raised outlines of figures with Elmer's Glue-All.

I find it helpful in working with deaf-blind multihandicapped children to define visually and tactually the area they will be working in. Do not just put a child at a table. Make a definite border around the work area to help the children focus on what they are doing. Use a visual outline; or, if the child's vision is very poor, use a tactile one.

Teachers should be consistent in providing the same area to work in. This is especially helpful with children who come for work over a long period of time. If you are conducting speech training or audiometric testing, you should find that being able to work with the child in the same place in the room or in the same area in the school is helpful. If you can do this consistently, the child will begin to associate the area with the task that you want him or her to perform.

While self-stimulatory behavior interferes with the child's learning, I try to ignore any kind of behavior problem unless it actually interferes with the work. If a child is staring at lights, for example, I do not push the child's head down. I find that if I take the materials up to where the child is looking, he or she will focus on them and will bring the head back down. So, instead of drawing attention to the fact that the child is staring up at the lights, I try to distract the child. I find this to be very helpful with most, but not all, children.

Not all behavior problems can be ignored, but you have to set priorities. If I can get children to look at something without trying to reshape their behavior, I would rather continue to work on the task, because my time is limited. As a diagnostic person, I do not have a year to work with a child. I might recommend to the teacher that the self-stimulatory behavior is interfering with a child's learning, and I might suggest that the teacher work on shaping that behavior out. As a diagnostic person, you are dealing with these children on a short-term basis, and if you get over-involved with these behavior problems, you may not have time to conduct the evaluation.

Observing the child in the home and in the classroom before working with the child is most helpful. If you are only going to see the child once, point out to your supervisor that you need extra time for observation. I have had children in a diagnostic classroom for six weeks who did absolutely nothing for me. Then I have gone back and visited these children in their schools or homes and have found them doing all kinds of things that made me completely revamp my thinking and my recommendations for training. Pushing for time to go into the child's home and school is valid no matter what type of evaluation you are conducting. Talking to the parents and teachers about what they are doing and how the child responds is valuable because you are not likely to see all these responses. In many cases you will see a difference between what a child does at home and what the same child does at school. This will help you in making recommendations about how to deal with the child.

As evaluators, you have to be aware that you are not working in one field. You are not going to be able to test only a child's hearing, vision, or cognitive skills. You will encounter many problems that tie these areas together. You need to be alert for special problems in each area, and even if you cannot do something about them, you can alert somebody else who can. Many times, for example, I have seen a need for parent counseling that I am not able to provide and that I would not feel comfortable trying to provide. A mother in the middle of a self-care demonstration, for example, will tell me something that is bothering her about her family and their relationship with the child, and I can make a referral to somebody who can help her.

You should know who the people are in your school, community, or home area that can help with special problems. I may be working on language but seeing all kinds of physical problems. I am not a physical therapist, but I have no business forming a language recommendation before the physical problems are dealt with. Therefore, I find that calling on other disciplines for consultive services is extremely useful. This is convenient for me because such help is readily available in our building. If your schools have any monies for special evaluations, or if the parents have any kind of insurance that covers special evaluations, you may want to take advantage of this additional advice in some cases. The help you receive should help you work more efficiently.

Try not to wear anything distracting in working with deaf-blind multihandicapped children. If I am going to be working with low-functioning children for a long period of time, I try to wear the same type of clothes. At one school for the blind, for example, all the teachers in the cottage with the lowest functioning children wear smocks every day. This helps the children to identify the teachers and to distinguish them from the aides and other persons working in the cottage where they live. I try to wear some identifying article of clothing that the child can associate with me. If the child likes odors and can associate you with an

odor, wear cologne or after-shave to help the child recognize you. Try anything you can to help the child identify you.

When you are working with a deaf-blind child, always use the same routine. Sometimes it helps to have the child wear or do something that he or she can associate with that activity. For instance, if you are going to work on motor skills, maybe the child can wear a vest. Every time the child works on motor skills, he or she puts on this vest. Or when the child is going to work on conditioning for an audiological examination, you can always seat the child in the same place and can show him or her the same picture of the headphones before he or she puts them on. If you always do the same thing, the child is going to learn what he or she is expected to do and will know what to expect from you.

An audiologist and a psychologist are not necessarily looking at the same things as a diagnostic teacher. They may not have the same goals, but they are going to see many of the same behaviors. I think, for example, that when you are concerned with cognitive areas of development, you should consider the child's visual awareness, tracking abilities, peripheral vision, depth perception, and any aids that the child is using or is supposed to be using. This will help you in making your evaluation. Sometimes you can get much of this information from the teacher before you see the child. The information will help you select the toys and items that you will use and the approach that you will take with this child.

Check whether or not the child is using amplification, what type it is, and how often he or she uses it. Some children wear a hearing aid or a phonic ear only two minutes a day. Other children may use them all day. Knowledge of such will make a big difference in the demands that you make on the child. I also look for any kind of hearing acuity they might have and use of residual hearing, such as startle responses or tuning in on different environmental sounds.

Awareness of the deaf-blind child's tactile abilities is important. Just playing with the child, finding out whether the child responds to different tactile sensations, determining the kinds of things that please the child, and determining the kinds of things that frighten him or her can help you in selecting materials.

The sense of smell is part of tactual awareness as is the sense of taste. I look for flavors and textures that the child chooses, and I look to see whether the child distinguishes edibles from nonedibles. If a child eats everything in sight, you are going to have to be very careful about what you leave around while you are working with him or her. Avoid things that he or she might swallow and that are going to be harmful.

No matter what field you are working in, you should look at the emotional and social adjustment of the child in the classroom and at home. Consider how the child relates to his or her family and how the family relates to the child. If the family is overrun with other kinds of problems, the members are not going to have the time to spend an hour a day doing special tasks with the child. If a teacher has 20 children in the classroom, all on different levels, you cannot demand too much teacher time for planning. Even if the child does not fit in well in a group, I do not think you can demand that the teacher or the parents work individually with the child for long periods of time. That is just not realistic. Considering how the child relates to all the people in his or her environment is helpful in planning.

Sometimes the teacher may want to be present when the evaluation is made. My first reaction to this was to be upset. I did not want the teacher there because I felt that I would not be able to do what I wanted to do. But as the testing went on, I found that the teacher was very helpful in working with the child. Even though we had discussed the child the day before, I learned many things that made my evaluation more effective. As a diagnostician you may easily isolate yourself. Granted, many times you are better off having the child alone with you. But if the change in routine is abrupt, the teacher can be beneficial in giving you the information you need. If you have the teacher work with you and tell the child what you want done, you will get a lot more in the way of results.

After the diagnostic evaluation has been completed and all the things the child is or is not doing have been determined, what then? If I feel that the child is in an inappropriate program, I try to decide on a more appropriate program and recommend that the child be put into a different one. If at all possible I like to see children stay at home and in a local program. But if you are in a rural area where no program for the deaf-blind is available, you have to look at other possibilities. If the family situation is so bad that the family cannot deal with the child, you may have to look for residential placement.

After the child is placed in an educational setting, I go directly to the school and share my recommendations with the teacher. I take my

report with me, and I explain to the teacher what I mean when I say use signing and what kinds of signs to use. I also go into the home and try to help the parents set up a home program that is realistic for their setting, something the whole family can be involved in. If a family has need for long-term follow-up, I am available for that. Sometimes all that is necessary is telling the teacher and the family that they are doing a good job and should continue with the same program.

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